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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,337	11/26/2003	Hidehiko Hori	2257-0239P	8371
2292	7590	09/22/2005		
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER BLACKMAN, ROCHELLE ANN J	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,337

Applicant(s)

HORI, HIDEHIKO

Examiner

Rochelle Blackman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,11-13,15-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 2-4,6-10,14,21 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 10, 2005 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "light shielding member is a light shielding substance applied to an end face of the only one light guiding member" in claim 18 in combination with the "light shielding member configured to shield light from the light source, which does not enter the only one light guiding member through the light entering surface" in claim 13, from which claim 18 depends, must be shown or the feature, "light shielding member is a light substance applied to an

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end face of the only one light guiding member" canceled from claim 18. Note: in Fig. 9, light shielding member 46, which is the "light shielding substance" applied to an end face of the only one light guiding member 40, does not shield light from the light source, which does not enter the only one light guiding member (this would be 8c in Fig. 9) through the light entering surface 40a. In addition, the features recited in claim 18 do not appear to be shown according to pg. 15, lines 15-17. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 9 objected to because of the following informalities: the claim recites the limitation "The projection type image display apparatus " in line 1 and 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5, 11, 12, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Childers et al. (U.S. Patent Application Publication No. 2004/0057017).

Regarding claims 1 and 5, Childers discloses an optical system/ a projection type image display apparatus (see Fig. 2) configured to guide light emitted from a lamp source (see 38 of Fig. 2) to an image display region (see the plurality of squares representing micromirror array elements of element 48 in Fig. 2) of a display device (see 48 of Fig. 2) along a predetermined optical path, to use said image display region of said display device to modulate a light component, and to project the modulated light component onto a predetermined screen (see 34 of Fig. 2), wherein only one light

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guiding member (see 42 of Fig. 2) for reflecting therein light entering through a light entering surface (see area of "light guiding member" 42 nearest element 40 in Fig. 2) several times to cause light having a uniform illumination distribution to outgo from a light outgoing surface (see area of "light guiding member" 42 nearest element 44 in Fig. 2) is inserted into an optical path between said lamp source and said display device, and said light outgoing surface of said light guiding member is formed in a dissimilar shape ("light outgoing surface" of "light guiding member" 42 has a circular shape) with said image display region (the above mentioned "image display region" has a square shape) of said display device, and a region (see any one of the plurality of squares representing micromirror array elements of element 48) irradiated with light in said image display region is smaller than said image display region.

Regarding claim 11, Childers discloses an optical system (see Fig. 2) comprising: only one light guiding member (see 42 of Fig. 2) including an internal reflective surface (the inside surface of "light guiding member" 42) and a light outgoing surface (see area of "light guiding member" 42 nearest element 44 in Fig. 2), the light guiding member being configured to receive light and use the internal reflective surface to repeatedly reflect the light, thereby causing the light to have a substantially uniform illumination distribution as the light is discharged from the light outgoing surface, at least part of the discharged light being transmitted along an optical path; and a display device (see 48 of Fig. 2) positioned along the optical path, the display device including an image display region (see the plurality of squares representing micromirror array elements of element 48 in Fig. 2) configured to modulate and reflect the at least part of the discharged light,

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thereby projecting modulated light onto a screen (see 34 of Fig. 2), wherein the at least part of the discharged light, which is transmitted to the display device via the optical path, is irradiated on only a portion (see any one of the plurality of squares representing micromirror array elements of element 48) of the image display region.

Regarding claims 12, wherein the light outgoing surface has a different shape (light outgoing surface" of "light guiding member" 42 has a circular shape) than the image display region (the above mentioned "image display region" has a square shape), thereby causing the discharged light, which is transmitted to the display device, to be irradiated on only a portion (see any one of the plurality of squares representing micromirror array elements of element 48) of the image display region.

Regarding claim 22, wherein said light guiding member is configured as a rod lens (see 42 of Fig. 2 and *integrator rod* in paragraph [0021] of pg. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 15, 16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childers et al. (U.S. Patent Application Publication No. 2004/0057017) in view of Dewald (U.S. Patent Application Publication No. 2001/0008470).

Childers discloses the claimed invention except for "(claim 13) a light shielding member configured to shield light from the light source, which does not enter the only one light guiding member through the light entering surface; (claim 15) wherein the light shielding member is positioned between the lamp source and the light entering surface; (claim 16) wherein the light shielding member is a light shielding plate having a center opening with substantially the same shape and optical axis as the light outgoing surface; (claim 18) wherein the light shielding member is a light shielding substance applied to an end face of the only one light guiding member; (claim 19) wherein the light shielding substance applied to an end face of the only one light guiding member facing the optical path, the light shielding substance being applied to an outer region of the end face, and the light outgoing surface comprises a region of the end face not shielded by the light shielding substance; (claim 20) wherein the light shielding substance is applied to an end face of the only one light guiding member facing the light source, the light entering surface comprises a region of the end face not shielded by the light shielding substance".

Dewald teaches providing a light shielding member (for example, see 302 of FIGS. 2, 3 and 6, note) configured to shield light from the light source, which does not enter the only one light guiding member through the light entering surface; wherein the light shielding member is a light shielding plate having a center opening (see circular shape of 304 of FIGS. 2 and 6 and also see circular entrance opening of 700 in FIG. 7) with substantially the same shape and optical axis as the light outgoing surface (as mentioned before, the "light outgoing surface" of "light guiding member" 42 of the

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Childers reference has a circular shape) wherein the light shielding member is positioned between the lamp source and the light entering surface (see location of 302 in FIGS. 2, 3 and 6, where integrator rod 300 would be used in FIG. 1 instead of rod 106, note: although integrator rod 300 has an rectangular shape, Dewald also teaches using integrator rod (700 of FIG. 7) having a cylindrical shape, which is a shape similar to the integrator rod of the Childers reference, therefore an integrator rod having a cylindrical shape like that of integrator rod 700, is considered to capable of being implemented with a light shielding member like that of light shielding member 302); wherein the light shielding member is a light shielding substance (see 302 of FIGS. 2, 3, and 6) applied to an end face of the only one light guiding member; wherein the light shielding substance applied to an end face of the only one light guiding member facing the optical path, the light shielding substance being applied to an outer region of the end face (see location of 302 in FIGS. 2, 3, and 6), and the light outgoing surface comprises a region (see 304 in FIGS. 2 and 6) of the end face not shielded by the light shielding substance; wherein the light shielding substance is applied to an end face of the light guiding member facing the light source (also see location of 302 in FIGS. 2, 3, and 6), the light entering surface comprises a region of the end face not shielded by the light shielding substance (also see 304 in FIGS. 2 and 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the light guiding member of the Childers reference with a light shielding member, as taught by Dewald for the purpose of maximizing light

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collection from the light source (see pg. 2, paragraph [0036], lines 7-8 and paragraph [0037], last 8 lines).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Childers et al. (U.S. Patent Application Publication No. 2004/0057017) in view of Dewald (U.S. Patent Application Publication No. 2001/0008470) as applied to claim 16 above, and further in view of Sasaki (JP Patent No. 07-281293).

Childers and Dewald disclose the claimed invention except for a light shielding member that is independently adjustable in relation to the light guiding member.

Sasaki discloses a light shielding member (5, A51, B52) that is independently adjustable in relation to a light guiding member (2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the combined Childers and Dewald reference with an independently adjustable light shielding member, as taught by Sasaki for the purpose of shielding the video light on the peripheral part of the display surface of a displaying body generating the video light, that includes much flare light, and improving the resolution of a picture on a screen (see abstract).

Allowable Subject Matter

1. Claims 2-4, 6-10, 14, 21, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

2. The following is a statement of reasons for the indication of allowable subject matter:

Claims 2-4, 6-8, and 21 have been found to be allowable because the prior art of record either alone or in combination neither discloses nor makes obvious the optical system or projection type image display apparatus comprising the particular feature of the only one light guiding member being a rectangular tube or configured as a rectangular tube, in combination with the particular combination of features recited in claim 1 or 5 or 11 and 12.

Claims 9 and 10 have been found to be allowable because the prior art of record either alone or in combination neither discloses nor makes obvious the optical system or projection type image display apparatus comprising the particular feature of the dissimilar shape of the light outgoing surface comprising an aspect ratio which is different from the aspect ratio of the image display region, in combination with the particular combination of features recited in claim 1 or 5.

Claim 14 has been found to be allowable because the prior art of record either alone or in combination neither discloses nor makes obvious the optical system comprising the particular feature of the light shielding member being positioned along the optical path between the light outgoing surface and the reflection type display device, in combination with the particular combination of features recited in claims 1 and 13.

Claim 23 has been found to be allowable because the prior art of record either alone or in combination neither discloses nor makes obvious the optical system

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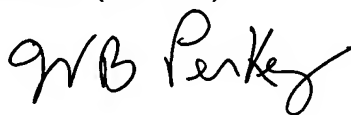
comprising the particular feature of the light outgoing surface of the only one light guiding member having a different an aspect ratio than the image display region, in combination with the particular combination of features recited in claims 11 and 12.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "WB Perkey".

RB

**William Perkey
Primary Examiner**